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AN ACCOUNT OF FLAMINGOES (PHŒNICOP-TERUS RUBER) OBSERVED IN THE VICINITY OF CAPE SABLE, FLORIDA.

BY W. E. D. SCOTT.

It was my good fortune, during February of the present year, to have an opportunity of observing for several days the only large flock of Flamingoes that still frequents the shores of the extreme southern portion of Florida. Here, owing to the environment, these birds have remained comparatively undisturbed, the region being very inaccessible, because of the absence of fresh water and the great expanses of very shoal salt water, that can only be navigated by the lightest draught skiffs on favorable tides; hence very few hunters, and only those who have declared the war of extermination on the Snowy Heron (Ardea candidissima) and the White Egret (A. egretta), ever visit the locality in question. The 'plume hunter' is in greater numbers and more active than ever in South Florida, and there are absolutely no Heron rookeries on the salt water bayous or on the outlying keys of the Gulf coast of Florida, from Anclote Keys to Cape Sable. I have recently spent some three weeks in earefully examining this coast, making in my small schooner from twentyfive to sixty miles a day, and the only rookeries that I saw were two on keys in Charlotte Harbor and three to the south of that

point, five in all. These rookeries were inhabited by comparatively small numbers of Brown Pelicans, Florida Cormorants, and White lbises,—nothing else.

Eighteen miles east of Cape Sable are three bays making into the mainland. The water in these bays and for miles outside of them is extremely shallow, being rarely more than eighteen inches in depth, while the average depth on ordinary tides probably does not exceed six inches. The bottom is soft and muddy, and the mud is very deep, making wading, for a man, impossible. The shores are wooded with black mangrove, 'button wood,' and some cabbage palmettoes, and there is much undergrowth of smaller shrubs. The land is so low as to be flooded at any extra high tide. The country is necessarily very damp, and is the home of the mosquito in all its varieties. Even in February, when I visited the region, though a stiff easterly breeze was blowing all the time, going ashore was something to be dreaded, and once on the land the conditions were wellnigh unbearable. It was a most desolate and forbidding region either on sea, if sea it may be called, or on the land.

I had heard much of this flock of Flamingoes, and taking a supply of fresh water, enough to last for a week, the schooner, or more properly 'sharpie,' was turned in the direction of the locality I had been led to believe the birds frequented. After rounding Cape Sable we were able to cruise in the sharpie, which only draws about eighteen inches of water, to a point some seven or eight miles east of the Cape and about two miles from the mainland. Here all semblance of a navigable channel ceased, and here I was obliged to make my headquarters. In the vicinity were a few scattered keys wooded with mangrove, all of them affording breeding places and homes for Ardea occidentalis. This beautiful and conspicuous species was not at all uncommon, but seemed there to be of a solitary disposition, in no way resembling its allies, all of which seem more or less gregarious, especially in the breeding season. An examination of the keys rarely showed the existence of more than two nests on an island, and the birds were so wary as to be almost impossible to approach, even when nesting. The breeding season, I should say, was fairly begun, if not at its height, and in one nest I found two downy young, one of which was apparently a day or two old, and the other just hatched from the egg and not yet dry. There

were also in this nest two unhatched eggs that contained large embryos. So it seems probable that incubation begins with the laying of the first egg, and is continuous till all are hatched. Of other birds there were few on these keys; but Brown Pelicans and Cormorants were frequent, and among the smaller land birds Thryothorus ludovicianus miamensis and Geothlypis trichas ignota were quite common, and a few representatives of each of the following species were observed at different times during my stay here: Dendroica blackburnia, Dendroica virens, Dendroica palmarum, Dendroica palmarum hypochrysea, Dendroica coronata, Galeoscoptes carolinensis, Seiurus anrocapillus, Seiurus noveboracensis, Melanerpes carolinus, Colaptes auratus, Falco sparverius, Ceryle alcyon, Cathartes aura, Haliaëtus leucocephalus, Corvus ossifragus.

To return to the Flamingoes. It was some nine or ten miles from our anchorage to the mouth of the first of the three bays I have mentioned,—a long way to go in a skiff. But both of our boats were soon manned and we began the details of the exploration. Rounding the point opening the first or more westerly of the bays, we found that it was about a mile and a half in width and some three miles deep into the land, with a decided bend to the west. No birds were to be seen till this bend was in turn opened, and there, still a mile or more away, was presented a truly wonderful sight. Stretched out for fully three quarters of a mile, and about three hundred yards from the mainland shore, was a band of rosy, fire-like color. This band was unbroken, and seemed to be very even, though curving with the contour of the shore. Now and again a flame or series of flames seemed to shoot up above the level of the line. This proved when examined through the glass to be caused by one or more birds raising their heads to look about or to rest themselves, for when first noticed all were feeding, with their heads most of the time buried in the shallow water, searching the mud for the small shell fish which appear to be the favorite food at this point.

Presently some of the birds saw the boats, and the alarm was given. Slowly the line began to contract toward the centre, and the birds were soon in a compact body, appearing now like a large field of red upon the water, and the resemblance to flames was much increased by the constant movements of the heads and necks of the different individuals. In a few moments they began

to rise and soon they were all in full flight, passing out of the bay and over the point of land to the east in long lines and in V-shaped parties, recalling to mind the flight of Wild Geese. If the color on the water was novel, that of the flock while in the air was truly surprising, a cloud of flame-colored pink, like the hues of a brilliant sunset. As far as we could descry the birds, the color was the great conspicuous feature. Looked at through the glass, while in flight, the individuals composing the flock were seen to be mostly adults. I saw only a small division of the lighter colored immature birds. These seemed to have their own particular position in the flock, and on this and subsequent occasions, when seen, these younger individuals were always alone. As nearly as could be estimated there were at least one thousand birds in this flock, and of these all but about fifty appeared to be adults.

After the flock had disappeared and had seemingly settled in the second of the bays, we allowed an hour or more to elapse before trying to approach them again. Then I took a stand on the end of the point that separated the first two bays, hoping to get a nearer look at the flock, should they return, when disturbed, to their first feeding place. One of my aids was also posted at what appeared to be another point of crossing for the birds, and the boat started toward the point where we believed the flock to have alighted. This time it was getting late in the afternoon, the birds were much tamer, and Mr. Henry W. Cook, who went after them in the boat, said that they were very loth to leave, and that the flock alighted twice after taking wing, before they finally flew, and this time again to the eastward and presumably into the third of the bays alluded to. Even then a considerable contingent, a hundred or more, did not forsake the second bay, but alighted in very shoal water where it was not possible to approach in the boat. So we left them after the first day, not having fired a shot, but having had a very good look at them, and having gained some idea of their habits when feeding and when alarmed.

The next morning on reaching the first bay, as soon as I was sure that the large flock was again feeding, the boats were concealed in the bushes, and for three hours I watched the flock with the glass, first having crawled along the shore as near as I could without creating alarm, so that I had a very good opportunity of watching them.

While feeding they were stretched out in the long line already described, sometimes in a single, but quite as often in a double rank. This line varied in length at different times, sometimes being fully a mile long and again contracting to some six hundred feet. When most stretched out it was broken in places, an interval of a hundred feet being the largest open space observed.

All the time the birds were feeding there were three small parties, varying from two to five individuals, that were apparently doing a sort of picket duty. At each end of the line and about one hundred yards from it was posted one of these parties, and off shore and at the centre of the line and some hundred yards away the third party was stationed. About every half hour the individuals composing these picket squads would take wing, fly to the flock in line and alight, and presently, that is in less than a minute, another or part of the same picket squad would leave the flock and fly to the point left but a few minutes before. I am not sure that the entire squad was changed at such times, but the pickets taking the place that had been left only a few minutes before were generally one or two more or less in number than the party they apparently relieved. I never saw more than five individuals in a party, and now and then there was only a single sentinel, but generally from three to five. The birds at these outposts did not appear to be feeding, but were apparently guarding against any attempt to surprise the main body.

After watching them for rather more than three hours, I again posted two men at points which I thought would give them opportunities to secure some of the birds, and taking one of the boats to windward with Capt. Cook to paddle, I attempted to drift down on to the flock. As we approached, the pickets flew and joined the line which gradually contracted into a solid body. Looking through the glass I saw they were all facing us Present. ly they flew as we came within five hundred feet of them. But they seemed very loth to leave their feeding ground, and soon all of them alighted again. This was repeated three times, when the flock seemed to loose its organization somewhat and became broken into smaller parties. One of these parties, composed of five adult birds, came within very long buckshot range, and I was so fortunate as to wound and finally secure a single one. The whole flock left as soon as I fired, and we did not find it again that day. The bird secured was in full, unworn, adult plumage, and proved on dissection to be a female, and from the condition of the ovaries laying would have begun, I think, in from four to five weeks.

The next day two more adult female birds were secured by members of the party, but though we tried afterward, and always saw the birds, they had become so wary that our efforts were futile. The ovaries of these two females were in about the same condition as in the one already described.

From information gathered from a man who has known of this flock of birds for several years, I am led to believe that they breed somewhere in this vicinity. He tells me that from July to January Flamingoes are to be found on the outlying islands and reefs of Barnes Sound and Biscayne Bay, but that in January they begin to congregate at the point I have indicated, where there are always at least a hundred of the birds the year round. From these facts and the approach to the breeding season indicated by the females we obtained, it seems altogether probable that this large flock of Flamingoes breeds at some point not far from where I found it.

My thanks are due to Capt. Cook and to Mr. W. E. Treat of my party for aid in securing and observing these remarkable birds.

CAPE COD BIRD NOTES.

BY G. S. MILLER, JR.

THE FOLLOWING notes were made during the years 1888 and 1889 in the vicinity of Highland Light, North Truro, Mass.

At this point Cape Cod is but little more than two miles wide. On the ocean side banks of clay and sand rise to a height of about one hundred and fifty feet above the water. From here the land slopes gradually westward, the general level broken only by an occasional valley or 'sink hole,' to the Bay where the sand 'cliffs,' as the natives call them, although much less high and commanding than those on the ocean side, are nevertheless quite